## BARNTALK® Dealer Support Guide

February 2024

BARNTOOLS"

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## MARKETING AND SALES ENABLEMENT



**Click the image above to access** our <u>complete</u> <u>library</u> of BarnTalk marketing and sales enablement assets. Make a copy of each file to customize them for your specific needs.

## **RECOMMENDED RETAIL PRICING**

Cateway P	Gateway	\$1,249	
	Indoor Temp Sensor	\$1	99
	Outdoor Temp Sensor	\$1	99
	Humidity Sensor	\$1	99
	Wireless Dry Contact Sensor	\$2	74
	BinTalk Feed Bin Sensor	\$9	99
		1⁄2"	\$199
Wir		3/ '' /4	\$249
	Wireless Water Meter	1"	\$299
		1 ¼"	\$399
		1 ½"	\$499

## BARNTALK<sup>®</sup> Yearly Subscription by Gateway



#### Need to cover a larger number of barns?

For Enterprise pricing, contact Sales at 515-220-2727, Option 1.

## What Does the Subscription Cover?

Each BarnTalk gateway comes pre-connected with built-in cellular connectivity. No landline, cell phone plan, or internet plan required!

As soon as you turn on the gateway, it automatically connects to the strongest cell carrier. It also works across multiple carriers for added back up in case one carrier were to have an outage.

The BarnTalk subscription covers this connectivity, as well as sending the data collected by the customer's BarnTalk system to their app.

#### How is the Subscription Set Up?

Subscription will start **30 days after the date of installation** and can be setup at the time of purchasing your hardware or shortly after **by contacting support@barntools.com** or calling **515-272-5122.** Either way, the **first 30 days of subscription are free.** 

#### How is the Subscription Paid?

Your subscription is setup to be paid <u>annually</u>. We will accept credit card, ACH or check.

• Checks can be mailed to: BarnTools 11236 NW Aurora Ave. Urbandale, IA 50322.







# Protect Your Investment with BarnTalk TotalCare

We Cover Any and All Damage

- Lightning Damage
- Fire Damage
- 🔮 Water Damage
- 🥑 Physical Damage



Enjoy Worry-Free Protection for **Just \$15/Month!** 

#### Call/Text 515-220-2958

today or visit **go.barntools.com/TotalCare** to learn more.

# BARNTALK® Site Layouts

## **1-Barn Finisher**

## 1,200 Head





**1** Indoor Temp Sensor

1 Water Meter, 3/4"

## Swine Double Wide

## 2,400 Head





## **Double Long Finisher**

## 2,400 Head





## **2-Barn Swine Layout** 2,400 Head



- Gateway
- BinTalk Sensors
- Indoor Temp Sensors

- Water Meters, 3/4"
- **ເ 1** WDC Sensor

## H-Style Finisher 4,800 Head



- Gateway
- BinTalk Sensors
- **4** Indoor Temp Sensors

- Water Meters, 3/4"
- **ີ 1** WDC Sensor

## **3-Barn Swine Finisher** 3,600 Head



- **1** Gateway
- **6** BinTalk Sensors
- **3** Indoor Temp Sensors

**3** Water Meters, 3/4"

ເຊິ້ງ **2** WDC Sensors

## **4 Barn Finisher** 4,800 Head





## Sow Farm Layout





## **Poultry Site** Layout 4 Houses





## **Poultry Site** Layout 8 Houses





# BARNTALK® USER MANUAL





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## SITE LAYOUT

A single Gateway can cover two barns on your site.

- The Gateways should be centrally located on your site.
- Sensors should be **placed within 700 ft. of the Gateway** for best connection.
- Minimize barriers between the antenna and sensors, including thick concrete/steel walls.
- Hang or place sensors **at least 1 foot away** from walls to optimize connectivity.

#### **2-BARN SITE LAYOUT**



#### **4-BARN SITE LAYOUT**



## **GETTING STARTED**

#### Thank you for purchasing the BarnTalk Wireless Alarm package.

Please read this manual carefully to familiarize yourself with all the installation and operating information. Also please visit our website **www.barntools.com/barntalk** regularly for updated manuals and product information.

#### GATEWAY

- Please keep the power plug clean and dry to avoid electric shock or other potential danger.
- Please conduct all the wiring with power off. DO NOT use any damaged or aged cables.
- For any abnormal behavior such as smoke, sound or smell during usage, please stop
- immediately, turn off the power, disconnect the power source and contact BarnTools.

#### **GATEWAY INTRODUCTION**

Light	Color	Frequency	Definition
Power Button LED	Green	Off	The device is off
		1 second on and 1 second off	The device is trying to connect with the cellular network
		3 seconds on and 3 seconds off	The device is connected and is initiating communication
		0.5 seconds on and 10 seconds off	The device is connected and uploading data to cloud. Working normally
Pairing Button LED	Red	On for 1 second	Successfully paired with the sensor





**Step 1:** Remove all six screws on the gateway box and open the gateway cover.

**Step 2:** Pass all the wires through the waterproof power connector and attach to each terminal with a Philips screwdriver.



**Step 3:** Tighten the waterproof power connector to "clamp" the wires with the rubber grommet.

DO NOT allow unauthorized personnel to open the gateway.Make sure to disconnect the device from any external power during wiring.

## FIRST TIME USE

The gateway contains one internal rechargeable battery. If it is the first time using the gateway, or the device has not been used for a very long time, connect the gateway with the external power supply and recharge the battery for 15 minutes before use.





Step 2: Plug the power cord into a power source

Step 3: Press the green button to turn on the Gateway

**a.** Green light will flash every (3) seconds during power up

**b.** Once connected to the internet it will flash every 10 seconds

#### EVERYTHING YOU NEED TO KNOW ABOUT GATEWAY INSTALLATION:

- Mount the Gateway to the wall near a power source, ideally the same power circuit as the ventilation controller.
- Plug into a service outlet or hard wire into existing line to prevent unintentional unplugging
- Install both antennas

The antennas are physically interchangeable

- Mount the antenna connected to the cellular port outside for best connectivity. Close to a window or outside wall may work in some locations
- Sensor antenna should be placed close to the sensors for optimal data reception
- Use provided metal brackets. Attach the brackets to the wall, set the magnetic base of the antennas on the bracket, secure with zip tie if needed.
- Keep a distance of 30 cm (12 inches) between two antennas.
- Keep a distance of 1.5 meters at least between BarnTalk devices and any kind of controllers to avoid interference.



## WIRELESS INDOOR TEMPERATURE SENSOR

#### **EXTERNAL COMPONENTS**



#### **INTERNAL COMPONENTS**

• Make sure to loosen the cable gland before unscrewing the cap



A user can observe the sensor's operating status by observing the LEDs. Push the Pairing button once for <1 second and observe the LED.

Action	Green LED	Red LED	Status
Press pairing button	OFF	OFF	Sensor is off or dead battery
Turn power ON	On .5 sec	ON .5 sec (green)	The device is just powered on
Press pairing button	ON 2 sec	OFF	Sensor is powered, but not paired
Hold pairing button (during pairing)	OFF	ON	Pairing successful
Press pairing button	ON 1 sec	ON .5 sec (after Green)	Currently paired to Gateway

• DO NOT submerge in water and DO NOT allow unauthorized personnel to open.

• Follow the battery instructions carefully to avoid potential fire, explosion or other hazards.

• Please use the same type of battery for replacement.

## WIRELESS OUTDOOR TEMPERATURE SENSOR

#### EXTERNAL COMPONENTS

#### **INTERNAL COMPONENTS**

• Make sure to loosen the cable gland before unscrewing the cap



A user can observe the sensor's operating status by observing the LEDs. Push the Pairing button once for <1 second and observe the LED.

Action	Green LED	Red LED	Status
Press pairing button	OFF	OFF	Sensor is off or dead battery
Turn power ON	On .5 sec	ON .5 sec (green)	The device is just powered on
Press pairing button	ON 2 sec	OFF	Sensor is powered, but not paired
Hold pairing button (during pairing)	OFF	ON	Pairing successful
Press pairing button	ON 1 sec	ON .5 sec (after Green)	Currently paired to Gateway

DO NOT submerge in water and DO NOT allow unauthorized personnel to open.

• Follow the battery instructions carefully to avoid potential fire, explosion or other hazards.

• Please use the same type of battery for replacement.

## WIRELESS HUMIDITY SENSOR

#### **EXTERNAL COMPONENTS**



• Make sure to loosen the cable gland before unscrewing the cap





A user can observe the sensor's operating status by observing the LEDs. Push the Pairing button once for <1 second and observe the LED.

Action	Green LED	Red LED	Status
Press pairing button	OFF	OFF	Sensor is off or dead battery
Turn power ON	On .5 sec	ON .5 sec (green)	The device is just powered on
Press pairing button	ON 2 sec	OFF	Sensor is powered, but not paired
Hold pairing button (during pairing)	OFF	ON	Pairing successful
Press pairing button	ON 1 sec	ON .5 sec (after Green)	Currently paired to Gateway

- DO NOT submerge in water and DO NOT allow unauthorized personnel to open.
- Follow the battery instructions carefully to avoid potential fire, explosion or other hazards.
- Please use the same type of battery for replacement.

## SENSOR PAIRING: Scan To Pair Method

**1.** Make sure the Gateway is turned on and the antennas are attached.

**2.** Open the BarnTalk app and click on the Gateway tile you would like to pair your sensor(s) to.

**3.** Click the 🔅 in the top right and "Add Sensor" when prompted.

**4.** The app will then bring up your phone's camera. Move the camera to view the sensor barcode to allow for scanning.

**NOTE**: If the barcode is unscannable or the camera does not open, the sensor serial number can also be manually entered for pairing.

Visit **go.barntools.com/pair** to learn more.





#### Scan barcode to add a new sensor

TIP: Scan the barcode on your sensor or box as shown below.



#### BARNTOOLS"

## SENSOR PAIRING: Push Button Pairing

**1.** Open the Sensor by unscrewing the cap on the sensor (Make sure to loosen the cable gland before unscrewing the cap)

**2.** Slide the power switch on the circuit board to "ON" (slide left switch to the right)

**3.** Press and hold the red "pairing" button on the Gateway and on the sensor's circuit board (on the right) at the same time. Hold for 10 seconds or until you see a red light on either the Gateway or the circuit board, next to the pairing button.

**4.** Reinstall the sensor cap, tighten until the notches align.









#### **CONNECTION CHECK**

- To check for a connection, press the pairing button on the sensor.
- A green light (LED 1) will flash, followed by a red light flash (LED 2).
- This confirms a connection between the sensor and the gateway.
- If the red light does not flash, pair again.
- You can also check for a connection when mounting the sensor in the building.
- Follow the same process, if you see the red light flash a connection is verified.
- If no red light, you should move the sensor closer to the gateway

#### **EVERYTHING YOU NEED TO KNOW ABOUT PAIRING OF SENSORS:**

- Each sensor must be connected (paired) to its gateway!
- It can take up to 15 minutes for a newly paired sensor to show on the app.
- Recommend pairing sensors in shop or office with a good cell service, then install in the barn after pairing and naming the sensors
- The best practice is to write name of sensor on the sensor's housing sticker. Edit the sensor name in the app to match. Hang in barn accordingly. Example:
  - Write on sensor = "West Barn, North Room" (do this when pairing)
  - Edit sensor name in the app = W. Barn, North (after sensor is visible in the app)
  - Hang sensor in the west barn near the north end (upon installation)

## **PLACE OR HANG THE SENSORS**

## EVERYTHING YOU NEED TO KNOW ABOUT PAIRING SENSORS:

- Place sensors in different areas of the building.
- Use zip tie, or S-hook to mount sensor from ceiling. Keep out of reach of animals.
- For best results do not power wash the sensors directly
- Label sensors before placing them and name them in the app (see pairing of sensors for more information)
- Outdoor sensor has an 8' lead wire for positioning the probe outside as desired. Sensor canister should stay indoors to ensure long battery life (extreme temperatures reduce battery life)
- Sensor signal strength is dependent on distance from the gateway and the number of obstacles between sensor and gateway. These include walls and metal structures such as bins.
- For best results, place your sensors within 700 feet of the Gateway.Signal strength can be checked by opening the sensor tile in the app.
- To check for a connection while locating the sensor, press the pairing button on the sensor. A green light will flash, followed by a red light flash. This confirms a connection between the sensor and the gateway. If the red light does not flash move the sensor closer to the gateway.



## **GATEWAY'S DRY CONTACT**

#### WHAT IS DRY CONTACT?

• Simple circuit that is either Open (no wire connected) or Closed (wire or connection between the terminals)

• All Gateways have (2) Dry Contacts available: Dry Contact 1(DIN1) and Dry Contact 2(DIN2). They are always open until the customer wires some circuit into the terminals.

- Wire up the dry contact (see YouTube)
- a. COMM

**b.** DIN1

**c.** DIN2

# Viewer VI.0

#### **Examples of Uses**

**a.** Ventilation Controller error wire (Choretronics, AP Edge, AP Expert (aka AirStream), Rotem, Farm Hand, or AeroTech (Munters). These typically have wires (COM, NC, NO). We prefer customers use COM and NC. This will close the BarnTalk Dry Contact. Using NC allows placing NC devices in series so that one BarnTalk Dry Contact can be used to monitor more than one controller. In this setup you will get notified if either one or multiple throw an error, but users will not be able to determine which one has the error without further investigation.

**b.** Water Pressure, water pressure pushes the spring up so that 2 contacts are in contact thus closing the circuit. This would cause the gateway to measure a closed state. Whenever the water pressure goes too low the spring forces the switch open creating a state change and can single an alarm.

**c.** Power (using a relay) when power is running through the relay it is closed. Once the power is cut the relay opens, creating an alarm.

d. Auger would work like power, needs a relay

e. Generator using NC/NO or using a relay





## **GATEWAY'S DRY CONTACT** CONTINUED

#### **IMPORTANT NOTES!**

a. NO = Normally Open; NC = Normally Closed.
Meaning the state of the circuit at rest.
b. It's called a dry contact because there is no

electricity in the circuit.

**c.** When installing, it is best to test the circuit to make sure it works as expected, that is why its best to use NC when possible.

**d.** You can "gang" two or more NC circuits together on DIN1 or DIN2 by wiring them in series. If one of them closes you will get an alarm going from Closed to Open, but you will not know which circuit is creating the alarm. To do this

take the NC wire from Relay #1 and connect to the COM for Relay #2.



#### THE BARNTALK APP CONTROLS



## SQUARE WIRELESS DRY CONTACT SENSOR

#### WHAT IS THE WIRELESS POWER MONITOR AND DRY CONTACT SENSOR?

- Each Wireless Dry Contact Sensor can **monitor power and 2 other pieces of equipment**. This sensor can be placed away from the Gateway, in a separate building for example.
- The Wireless Dry Contact Sensor uses the terminals in the sensor (DIN1, DIN2, and COM) to monitor the Open/Closed state of up to 2 circuits.
- If the power goes out, the sensor will automatically switch to its battery power source and notify BarnTalk users of the outage.
- Once this sensor is paired with a Gateway, the app will show controls for managing alerts. Visit **go.barntools.com/wdc-alarm** to learn more.



#### SETTING UP THE SENSOR

**1.** The sensor comes with a power supply. Use of the power supply is optional. Power monitoring is accomplished by connecting the **Red wire to the +5V terminal** and the **Black wire to the GND terminal**. The power supply will also keep the on-board battery fully charged.

**2.** Normally Open (NO) or Normally Closed (NC) circuits can be wired into the sensor using DIN1 and either COM terminal. A second circuit can be monitored using DIN2 and either COM terminal.



#### Wireless Dry Contact Terminals:

- DIN1 and DIN2 (Digital Input)
- COMM (Common) there are 2 COMM terminals to allow for both circuits.
- COMM terminals are tied together so could actually use either one.
- DO NOT submerge in water and DO NOT open it by unauthorized personnel.
  DO NOT connect a powered circuits to this sensor, other than the provided BarnTalk sensor power supply provided.
- Follow the battery instruction carefully to avoid potential fire, explosion, or other hazards.
- Please use the same type of battery for replacement.

## **SQUARE WIRELESS DRY CONTACT SENSOR**



#### **SENSOR BEHAVIOR**

Check sensor connectivity by tapping the **pairing button** in the lower right hand corner of the WDC sensor.



After tapping the pairing button, **If the L1 light flashes Green**, then your sensor **IS Communicating** 

View the full help article at **go.barntools.com/WDC** to learn more.



After tapping the pairing button, if **the L2 light flashes Red**, then your sensor is **NOT Communicating.** 

If you come across this behavior, first try to pair the sensor to the respective Gateway. If the behavior persists, contact our support team.



Each input (DIN1 & DIN2) will show you if the WDC sensor is reading an 'Open' or 'Closed' circuit right at the sensor! No need to check the app anymore during this step.

An **OPEN** circuit is shown by *flashing* lights, while a **CLOSED** circuit will be shown by a *solid* light.

## **USING THE BARNTALK APP**

With the BarnTalk app, you can remotely monitor your barn conditions 24/7 and view active alarms.



Barn with No Alarms



**Barn** in a **Warning State** A push notification will be sent to your CallTree.



**Barn** in an **Emergency State** An emergency call and text will be sent to your CallTree.

#### ACCESS IN-DEPTH ALARM DETAILS

When an emergency happens, get prompted to take appropriate actions. To acknowledge alarms, click the "**Attend to alarm**" button inside your BarnTalk app.



Current ter	nside 95
The temperature is emergency thresh Check barn immed	s increasing past your old. liately.
Sensor Type	Temperature
Breach Value	72F
Max Temp	97F
Triggered at	07:25 am
Date	01/06/2020
Duration	36 minutes
A+	tend to alarm

## MANAGE YOUR SENSOR THRESHOLDS

Set and adjust your barn's sensor thresholds so you can get notified when barn conditions fall outside of your parameters.

#### **ADJUSTING YOUR THRESHOLDS**

- **1.** Select the Gateway for the sensor you'd like to set thresholds for under your "**Active Barns**" list.
- 2. Click the tile for the sensor you want to adjust the thresholds for.
- 3. Select the "Manage Threshold" tab.
- 4. Toggle the "Enable Threshold Settings" button on.

• This will allow you to receive alarms when barn conditions fall outside of the thresholds you've set for the sensor.



#### **RECEIVING ALARMS**

**Warning State:** A push notification will be sent to your CallTree.

**Emergency State:** An emergency call and text will be sent to your CallTree.

5. Scroll down to edit the sensor thresholds for the sensor.

6. Select the plus or minus symbol on the **High Temp Emergency** and **Low Temp Emergency** thresholds.

• If the temperature exceeds these limits, you will **receive a call or text** notifying you of the emergency.

**7.** Select the plus or minus symbol on the **High Temp Warning** and **Low Temp Warning** thresholds.

• These set points should be between 2 to 5 degrees *below* your High Temp Emergency threshold, and 2 to 5 degrees *above* your Low Temp Emergency threshold.

8. Click "Save Settings."



## **RENAME YOUR GATEWAYS AND SENSORS**

#### NAMING YOUR GATEWAY

**1.** Select the Gateway you would like to rename under your **Active Barns** list.

- 2. Click the gear icon and select "Rename Your Barn."
- **3. Type in the name** for your Gateway.

4. Hit "Save."



#### NAMING YOUR SENSORS

**1.** Select the Gateway for the sensor you would like to rename under your **Active Barns** list.

2. Click the tile for the sensor you would like to rename.

3. Click the pencil icon next to the current name of your sensor.

**4.** Type in the new same for your sensor.

5. Hit "Save."

You can also **change the name of your Gateway and sensors at any time** by following the same process.



## SETTING UP YOUR CALLTREE

Build a team of people in your organization **to help monitor your barns.** They will be **notified in the order of the CallTree** when barn conditions fall outside of the norm.

#### INVITE SOMEONE TO YOUR CALLTREE

- 1. Select the Gateway for the CallTree you would like to edit.
- 2. Click the gear icon in the top right-hand corner and select "Manage CallTree."
- 3. Select "Edit List" at the bottom of the screen.
- 4. Invite a team member from your phone's contact list. An SMS will be sent to the person.
- 5. The new team member will be added to your CallTree list.

	< GOOD	< Manage CallTree	Select New Member
BARNIALN	Van Blarcom GDU	Oak Hollow Farm	C Select Herr Herriber
tive Barns			Q Search
GOOD >	Updated 1 min ago	CallTree List () EDIT Emergency call goes to the first person in the list.	All contacts
Updated 1 min ago	<b>7 7 0 5 7</b>	(1) Karen Lee (Barn Owner) (545) 532-0000	AT Adrian Tan (545) 532-0000
⊊ Excellent ⊕ Powered ① No Alarms	Temp Inside Water (last 24hr) 120600201 734523412	Matt Harrison	AT Anne Thomas (545) 532-0000
	72 F 9,440 gal	(545) 532-0000	BA Barry Adams (545) 532-0000
GOOD > Saratoga Finished	og ₹0 ∧ ₹0	3 Jim Ryken (545) 532-0000	B Bobby +1 545 532 0000
Updated 1 min ago	Temp Outside         Humidity           120600253         645060856		DL Darren Lee (545) 532-0000
Excellent 🖞 Powered 🕥 No Alarms	72 <sup>F</sup> 82%	Michael Hansen (545) 532-0000	Dominic (545) 532-0000
6000	e		EE Emma Thompson Already added to the team
Van Blarcom GDU Updated 1 min ago	Barn Power		MH Michael Hansen (545) 532-0000 (Mobile)
<b>a</b> a	ON		MH Michael Hansen (545) 532-0000 (Work)
Barns Settings		Edit list Invite new	NH Nate Harrison (545) 532-0000 (Work)

## **SETTING UP YOUR CALLTREE** CONTINUED

#### ARRANGE THE ORDER OF YOUR CALLTREE

- **1.** Select the Gateway for the CallTree you would like to edit.
- 2. Click the gear icon in the top right-hand corner and select "Manage CallTree."
- 3. Select "Edit List" at the bottom of the screen.
- **4.** Touch the Up and Down Arrows to arrange the order of your CallTree.
- **5.** Click the red "**Save**" button.

(41 all 🕆 💻	9:41I 🗢 💻		
		Anage CallTree Oak Hollow Farm	C Manage CallTree Oak Hollow Farm
tive Barns		College List ()	
GOOD >	Lindated 1 min ann	Emergency call goes to the first person in the list.	Reorder Call Iree CANCEL SAVE
Updated 1 min ago	8 70 70	Karen Lee (Barn Owner)     (545) 532-0000	(545) 532-0000
후 Excellent 법 Powered ① No Alarms	Temp Inside         Water (Jast 24hr)           120600201         734523412           72 F         9,440 gal	(2 Matt Harrison (545) 532-0000	Matt Harrison (545) 532-0000
GOOD > Saratoga Finished Updated 1 min ago	°g ? 0 0 ? 0	3 Jim Ryken (545) 532-0000	Jim Ryken (545) 532-0000
후 Excellent 법 Powered ۞ No Alarms	Temp Outside         Humidity           120600253         645000856           72 F         82%	Michael Hansen (545) 532-0000	Michael Hansen (545) 532-0000 (Work)
GOOD > Van Blarcom GDU Updated 1 min ago	e Barn Power ON		
Barns Settings		Edit list Invite new	Cancel Save

## **GATEWAY AND SENSOR BATTERY REPLACEMENT**



#### **GATEWAY BATTERY**

18650 Lithium Ion Rechargeable Cell (3.6V AA 2400mAh)





SENSOR BATTERY CR123A Lithium Ion 3V



Name/Title	Vendor	Brand	Vendor Part #	UOM	Description
Battery - Gateway	BarnTools	3.6V AA 2400mAh Lithium Ion Battery (rechargeable)	BT- HW-05-00	EA	Battery - Gateway
Battery - BarnTalk Tube Sensor	BarnTools	CR123A 3.0V Lithium Ion Battery (non- rechargeable)	BT- HW-04-00	EA	Battery - BarnTalk Tube Sensor

#### **BATTERY RANGES**

Device	Voltage Range	RSSI (dbm)
Gateway	2.4 to 4.2	-114 to 0 (4G)
Sensor	1.4 to 3.3	-145 to 0



#### Q1: How do I restart the gateway?

Press the green power button on the right and release the button to see if the Running LED is off. Wait for 5 seconds and press the button again to see if the Power button LED is flashing.

#### Q2: How do I pair the sensors with the gateway?

Refer to the Sensor Pairing section on [PAGE #].



#### Q3: How do I connect the gateway with my APP after the installation?

- In the BarnTalk App, click the + in upper right-hand corner
- Scan the bar code (serial number) on the front of the gateway or type in the number
- If you are the first person to scan that bar code you will be assigned as the owner.
- If someone else has already been assigned to that Serial Number, you will get an error message and need to contact BarnTools to get it resolved.

#### Q4: How do I fix device showing offline in APP?

- Check if the gateway green Running LED flashes, if it doesn't flash check the external power supply.
- Restart the gateway wait for 2 minutes and check if the Running light flashes.

#### Q5: How do I improve gateway signal?

- Check if the antenna attachment is loose.
- Check the installation of the cellular antenna, suggest moving the antenna outside of the barn / house.

## LIMITED WARRANTY

BarnTools, LLC ("**BarnTools**") warrants to the first end user that all BarnTalk hardware components sold: (a) are compatible with the software provided by BarnTools and (b) are fit for use in connection with the software services provided by BarnTools at the time of purchase. This limited warranty applies only to BarnTalk hardware components that are properly installed, operated and maintained under industry standard conditions. Without limiting anything to the contrary herein, this warranty shall not apply to, and in no event shall BarnTools be liable for damages arising out of or resulting from, any BarnTalk hardware components which have been subjected to improper storage or application, misuse or neglect, alteration, improper handling or transport, improper installation or repair, or that have been damaged or rendered inoperable by power outage, lightning, flood, or other extreme weather events or acts of God (collectively "Uncovered Events"). For purposes of clarity and without limiting anything to the contrary herein, BarnTools shall not be held liable for damage to any animals or other livestock, or other personal objects under any circumstances. See BarnTalk TotalCare at https://barntools.com/warranty for details on the extended warranty plan for coverage of these "Uncovered Events".

BARNTOOLS' OBLIGATION UNDER THIS WARRANTY IS LIMITED TO REPLACEMENT OF ANY BARNTALK HARDWARE COMPONENTS IF BARNTOOLS FINDS THAT THE HARDWARE COMPONENTS DO NOT CONFORM TO THIS LIMITED WARRANTY. Upon completion of the warranty determination, whether accepted or denied, returned parts become the sole property of BarnTools.

This limited warranty shall go into effect on the date of purchase of the hardware components by the first end user and will remain in effect for a period of one (1) year thereafter so long as the hardware is registered to an active subscription for BarnTalk software services. In addition to and without limiting the foregoing, this limited warranty will terminate automatically upon termination of the BarnTalk software subscription linked to the BarnTalk hardware.

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# PRODUCT CATALOG



Reliable Alarms. Instant Connectivity. Easy Setup.

BARNTOOLS"

#### **BARNTALK GATEWAY**

#### **Technical Specifications**

Туре	Description
Model	BT-GW-01-00 (110V, US) or BT-GW-02-00 (5V, CAN)
Size/Weight	10 ½ x 7 x 4 inch / 265 × 185 × 95mm 1.75 lbs / 800 g
Protection Level	IP65
Power Supply	BT-GW-01-00: 100-220V AC BT-GW-02-00: 4.35 - 5.5 V, 280 mA
Power Consumption	1.25 Watts
Battery Backup	Built in Lithium Ion cell type 18650 (2600 mAh) up to 24 hours
Working Environment	Temperature: 23 °F ~ 122 °F / - 5 °C ~ 50 °C Relative Humidity: 0 ~ 99.9% RH with no condensation
Cellular Communication	Multi carrier, LTE Cat 4, M2M, IoT module optimized applications Worldwide
WAN	LTE, UMTS/HSPA(+) and GSM/GPRS/EDGE High Sensitivity 915 ISM frequency band LoRa Module
Case Material	ABS Plastic
Installation	Wall Mount



#### **Gateway Dimensions**



#### WIRELESS INDOOR TEMPERATURE SENSOR



Туре	Description
Model	BT-TS-01-00
Measure Range	14 °F ~ 122 °F / -40 °C to 75 °C
Accuracy	±1 °F / 0.5 °C
Resolution	0.2 °F / 0.1 °C
Power Supply	Disposable Lithium Battery
Battery Life	Up to 2.5 years
Working Environment	Temperature: 14 °F ~ 122 °F / -10 °C ~ 50 °C Relative Humidity: 0 ~ 99.9% RH with no condensation
WAN	High Sensitivity 915 ISM frequency band LoRa Module
Protection Level	IP65
Shell Material	Nylon Plastic
Size	Ø 3 x 6 ¼ inch / Ø72*280 mm
Weight	0.5 lbs / 252 g
Installation	Free Hanging

#### WIRELESS OUTDOOR TEMPERATURE SENSOR



Туре	Description		
Model	BT-TS-02-00		
Measure Range	-22 °F ~ 122 °F / -30 °C ~ 50 °C		
Accuracy	±1 °F / 0.5 °C		
Resolution	0.2 °F / 0.1 °C		
Power Supply	Disposable Lithium Battery		
Battery Life	Up to 2.5 years		
Working Environment	Temperature: -22 °F ~ 122 °F / -30 °C ~ 50 °C Relative Humidity: 0 ~ 99.9% RH with no condensation		
WAN	High Sensitivity 915 ISM frequency band LoRa Module		
Protection Level	IP65		
Shell Material	Nylon Plastic		
Size	Ø 3 x 6 ¼ inch / Ø72*280 mm		
Weight	0.5 lbs / 252 g		

#### WIRELESS HUMIDITY SENSOR



Туре	Description
Model	BT-TS-03-00
Measure Range	0% ~ 99.9%
Accuracy	± 2%
Resolution	0.1 %
Power Supply	Disposable Lithium Battery
Battery Life	Up to 2 years
Working Environment	Temperature: 14 °F ~ 122 °F / -10 °C ~ 50 °C Relative Humidity: 0 ~ 99.9% RH with no condensation
WAN	High Sensitivity 915 ISM frequency band LoRa Module
Protection Level	IP65
Shell Material	Nylon Plastic
Size	Ø 3 x 6 ¼ inch / Ø72*280 mm
Weight	0.5 lbs / 252 g

#### WIRELESS DRY CONTACT SENSOR - SQUARE





Monitor Generators, Water Pressure, Ventilation, Contollers, Feed Lines, Power at the Barn/House Level, Power at the Room Level, and More



External Power Supply included

#### WIRELESS FEED BIN SENSOR



Туре	Description
Model	BT-FS-01-00
Measurement Range	12' Diameter, up to 33ft (10m)
Accuracy	±95% of load cells
Camera	3D camera + emitter 38,000 pixels resolution
Power Supply	Solar + Lithium iron phosphate Battery
Battery Life	Up to 5 years
Working Environment	Temperature: -22°F~122°F / -30°C~50°C
Wireless Communication	915Mhz frequency band LoRa Module
Cable	4 ft long (Camera to Solar Comm Box)
Protection Level	IP66
Sensor Material	Poly Carbonate
Weight	1.5 pounds
Size	Camera Sensor 7" $\times$ 5" $\times$ 3"   Solar Comm Box = 6" $\times$ 5" $\times$ 2"

#### WIRELESS WATER METER

#### **Technical Specifications**

Туре	Description				
Size	1/2"	3/4"	1"	1 1/4"	1 1/2"
Nominal Flow (GPM)	12	20	30	50	80
Max Flow (GPM)	13.7	22.0	34.7	55.0	88.1
Min Flow (GPM)	0.04	0.07	0.11	0.18	0.29
Accuracy	+/- 0.2% between Min and Max Flow				
Maximum Pressure Rating	225 psi				
Power Supply	Permanent Lithium Battery				
Battery Life	Up to 8 years				
Working	Temperature: 14 °F ~ 122 °F / -10 °C ~ 50 °C				
Environment WAN	High Sensitivity 915 ISM frequency band LoRa				
Protection Level	Module IP68				
Pipe Material	Brass or 301 Stainless				
Shell Material	Nylon Plastic				
Size	See Table				
ISO Standard	Confirm to ISO standard: ISO4064: 2014				



#### Water Meter Dimensions









Size	Thread	US Nominal	L(in)	L1(in)	H(in)	W(mm)
1⁄2"	G¾B	½"NPT	4.59	6.50	3.80	3.82
<sup>3</sup> /4"	G1B	¾"NPT	4.59	7.68	3.80	3.82
1"	G1¼B	1"NPT 1	4.59	8.86	4.21	3.82
1 ¼"	G1½B	¼"NPT 1	4.59	7.09	4.33	3.82
1 ½"	G2B	½"NPT	4.59	7.87	4.53	3.82

# BARNTALK® Install Guides

## BARNTALK<sup>®</sup> EASY INSTALL GUIDE

#### ADDING YOUR GATEWAY

Scan the QR code or visit go.barntools.com/subscription.

- 2. Check your text messages for a link to download the BarnTalk app or search 'BarnTalk' in the AppStore or Google Play Store.
- 3. Download the app, log in, and follow the steps to scan the barcode in the bottom right corner of the Gateway as shown.

Follow the in-app prompts to setup the Gateway and two Antennas.

**TIP:** If you've previously downloaded the demo app, or have already installed a Gateway, touch the "+" on the top of your screen to add your new Gateway.

4. Open each Sensor and turn the sensor "ON" (power switch is located in the lower left corner of the circuit board).

NOTE: Water meters & BinTalk feed sensors do not have a power switch and will automatically start reading after installed.

- **5.** If you don't see your sensors in the app, pair your sensors with Scan to Pair.
  - Open the app, select the Gateway tile for the sensor you'd like to pair.
  - Click O in the top right and "Add Sensor" when prompted.

Visit go.barntools.com/pair to learn more.



SCAN ME

al tre 🔳 BARNTALK



BarnTalk Demo

(+)



#### SENSOR GUIDELINES

- Typically, **2 barns** can be covered by **1 Gateway.**
- The Gateway should be centrally located on your site.
- Sensors should be placed within 700 ft. of the Gateway for best connection.
- Minimize barriers between the antenna and sensors, including thick concrete/steel walls.
- Hang or place sensors at least 1 ft. away from walls to optimize connectivity.
- 1 Temperature Sensor per room <u>OR</u> every 100 ft. in large rooms.
- 1 Humidity Sensor per room.

Visit go.barntools.com/start for more best practices on setting up BarnTalk.

#### ANTENNA PLACEMENT GUIDELINES

- Cellular antenna should be mounted outside and as high as possible.
- Sensor antenna should be placed in a centralized location to all sensors, inside the barn, and about head height. On multi-barn sites, it may need to be placed outside.
- Antennas should be mounted to **point vertically**, <u>not</u> horizontally



#### **ADDITIONAL INFORMATION**

- Learn how you can monitor conditions in the BarnTalk Web Portal: barntalkportal.barntools.com
- Set up Water Meter alarms in the Web Portal: go.barntools.com/WMalarm
- How to install the **BinTalk** wireless feed bin sensor: **go.barntools.com/bintalk.**
- The BarnTalk Gateway can monitor power and (2) separate Dry Contact Circuits. Visit **go.barntools.com/GWDC** to learn more.

#### SUPPORT RESOURCES

Install Video: go.barntools.com/watch

Help Center: **support.barntools.com** 

Email Support: support@barntools.com

Call/Text: **515-272-5122 or** Call Toll Free: **855-580-0058** Monday-Friday, 8 AM-5 PM CST

## BINTALK Quick Install Guide



#### **Connect your BinTalk sensor**

Take your sensor out of the box and open the BarnTalk app. If you don't see the BinTalk sensor listed under your Gateway, tap the gear icon and choose "Add Sensor".





#### Enter your BinTalk settings

Next, follow the prompts in the app to fill out your bin details. We'll walk you through the rest with a few easy steps!



#### **Clip your sensor to the bin collar** Attach the sensor straight up and down near

the lid's hinges. Use the two self-tapping screws to secure it tightly.

**NOTE**: BinTalk wakes within 6 hrs. of installing. For a faster reading within 1 hr, open the solar panel cover and press the pairing button.



If BinTalk is connected to your Gateway, **'L1' light will flash green** after 10-15 seconds.



If **'L2' flashes red**, contact Support at 515-272-5122.







**Secure the solar panel** Attach the magnetic solar panel on the side with **the most sunlight**.

**Route the cord outside the bin** to prevent it from getting pinched.



Place solar panel with the **cord at the bottom**.





#### Label your bin

Use a permanent marker to label the bin number and serial number. Stick it onto your bin, and you're all set!



#### **ADDITIONAL SUPPORT RESOURCES:**



For more in-depth info on BinTalk, scan the QR code to access videos and a detailed support article.



Help Center and FAQs: support.barntools.com



Email our support team: support@barntools.com

Call or Text: **515-272-5122** | Call Toll Free: **855-580-0058** During the hours of 8 AM - 5 PM CST Monday-Friday



Scan with Phone Camera



- The water meter can be installed on either side of a medicator.
- Plumb the water meter in a straight section of pipe of at least 12 inches long.
- The arrow in the center of the brass pipe should point the same direction as the water flow.



IMPORTANT The water meter will

<u>not read</u> if the arrow is installed backwards.

\*Once installed, water meter readings will take ~20 min to appear in the app.

If you don't see your water meter in the app, pair it using Scan to Pair.

- Open the app, select the Gateway tile for the water meter you'd like to pair.
- Click C in the top right and "Add Sensor" when prompted.

Visit go.barntools.com/pair to learn more.



Scan barcode to add a new sensor TIP: Scan the barcode on your sensor or box as shown below





#### **Set Up Your Water Meter Alarms:**

- To learn how to set up Water Meter alarms in the Web Portal, visit **go.barntools.com/WMalarm.**
- Direct Link to Web Portal: barntalk-portal.barntools.com

#### SCAN WITH



**PHONE CAMERA** 

## WATER METER HELP ARTICLE Scan the QR code to read more about installing your BarnTalk Wireless Water Meter.

## ADDITIONAL SUPPORT RESOURCES

▶ Install Video: go.barntools.com/water

Help Center: **support.barntools.com** 

Email Support: support@barntools.com

Call/Text: 515-272-5122
 or Call Toll Free: 855-580-0058
 Monday-Friday, 8 AM-5 PM CST

- Each Wireless Dry Contact Sensor can **monitor power and 2 other pieces of equipment.** This sensor can be placed away from the Gateway, in a separate building for example.
- The Wireless Dry Contact Sensor uses the terminals in the sensor (DIN1, DIN2, and COM) to monitor the Open/Closed state of up to 2 circuits.
- If the power goes out, the sensor will automatically switch to its battery power source and notify BarnTalk users of the outage.
- Once this sensor is paired with a Gateway, the app will show controls for managing alerts. Visit **go.barntools.com/wdc-alarm** to learn more.



#### SETTING UP THE SENSOR

**1.** The sensor comes with a power supply. Use of the power supply is optional. Power monitoring is accomplished by connecting the **Red wire to the +5V terminal** and the **Black wire to the GND terminal**. The power supply will also keep the on-board battery fully charged.

**2.** Normally Open (NO) or Normally Closed (NC) circuits can be wired into the sensor using DIN1 and either COM terminal. A second circuit can be monitored using DIN2 and either COM terminal.



### WDC SENSOR BEHAVIOR

Check sensor connectivity by tapping the **pairing button** in the lower right hand corner of the WDC sensor.



After tapping the pairing button, **If the L1 light flashes Green**, then your sensor **IS Communicating** 



After tapping the pairing button, **if the L2 light flashes Red**, then your sensor is **NOT Communicating.** 

If you come across this behavior, first try to pair the sensor to the respective Gateway. If the behavior persists, contact our support team.



Each input (DIN1 & DIN2) will show you if the WDC sensor is reading an "Open" or "Closed" circuit. No need to check the app anymore during this step.

An **OPEN** circuit is shown by *flashing* lights, while a **CLOSED** circuit will be shown by a *solid* light.

View the full help article at **go.barntools.com/WDC** to learn more.



# BARNTALK<sup>®</sup> Questions? Contact us today:



To connect with someone from our Sales Team, Call/Text 515-220-2966.



Email our support team: support@barntools.com



Call or Text: **515-272-5122** 

Call Toll Free: 855-580-0058

During the hours of 8 AM - 5 PM CST Mon-Fri

